

as his time in Washington was too short to enable him to do this. In those species which are represented by a unique specimen, it would be extremely hazardous to attempt a separation without immediate access to the material for purpose of comparison, and the author is unwilling to risk adding confusion to an already sadly confused subject.

#### ACKNOWLEDGMENTS.

To his friends and associates in the Canal Zone, Dr. D. P. Curry, Assistant Chief Health Officer, Mr. C. G. Brown and Mr. C. L. Pierce, District Sanitary Inspector and Supervising Sanitary Inspector respectively, for the Panama Canal Health Department, for their unstinted aid in collecting material and giving him the benefit of their specific knowledge of the local fauna; to Dr. Alan Stone, in charge of the Culicidae at the U. S. National Museum, for his interest and invaluable assistance while at the Museum; to Dr. E. A. Chapin, Curator of Insects at the U. S. National Museum, for permission to dissect type material, and for other kindly assistance, the author gives his hearty thanks.

#### NOTES ON TABANIDAE (DIPTERA).

By ALAN STONE,

*Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture.*

In the course of preparation of a revision of the nearctic species of the genus *Tabanus* a number of new forms have been discovered and certain nomenclatorial conflicts noted. Since it will be some time before the revision can be completed and published, it has been thought advisable to publish a preliminary paper dealing with these findings. The writer wishes to express his thanks for the opportunity of studying the Hine collection at the Ohio State Museum, and the permission to borrow material from there for study and to retain certain paratype material for the United States National Museum collection.

#### *Dieladocera sexfasciata*, n. sp.

*Female.*—Length 15 mm. Eyes sparsely pilose, green, with a slender, diagonal, purple band. Front slightly over three times as high as its width at the frontal callus, slightly narrowed above. Vertex depressed, a denuded area just anterior to it, but no ocelligerous tubercle; frontal callus chestnut brown, rectangular, slightly transverse; median spot slender and small, narrowly joined to the frontal callus. Pollen of front yellowish gray. Subcallus light gray pollinose, somewhat protuberant. First two antennal segments light orange-brown with black hairs; third segment dark orange-brown. Shape as in Fig. 1. Face and cheeks nearly white with white hair. Palpi pale creamy with white hair and a few black hairs; shape as in Fig. 1.

Mesonotum brownish gray pollinose; a broad, median, nearly black stripe

reaching two-thirds of the way to the scutellum, faintly divided medianly by a paler brown line; posterior to this a narrow, brown, median line reaching to the scutellum; laterad of the median stripe a pair of black stripes, broken on the transverse suture, narrowing behind, and nearly reaching the scutellum; posterior portion surrounded by a brown area; antearlar tubercle with heavy black hair; pale yellow hair above wing base. Scutellum entirely dark brown. Pleurae and coxae yellowish gray pollinose with white hair. Wings hyaline, the costal cell and margin of vein  $R_{4+5}$  to the furcation brown. Cell  $R_5$  wide open. Legs orange-brown, the apex of the fore tibiae and the tarsi darker. Hair of legs mostly yellowish brown, the hind tibial fringe short and sparse.

Abdomen dark brown with narrow, light yellowish gray, posterior bands on tergites 1-6; first band slightly wider than the others; second tergite with a median triangle of the same color, narrow anteriorly and nearly reaching the anterior margin. Venter brownish gray pollinose with median dark spots anteriorly on sternites 3-7.

Holotype female from Largo Key, Pinellas Co., Fla., March 4, 1925, F. M. Gaige. Paratype from Gulfport, Pinellas Co., Fla., March 8, 1925, F. M. Gaige. Holotype in Ohio State Museum Collection. Paratype in United States National Museum Collection (Cat. No. 50612).

#### *Tabanus gladiator*, n. sp.

*Female*.—Length 22-25 mm. Eyes bare. Front about six times as high as its width at the frontal callus, only slightly widened above, with gray pollen, usually tinged with yellow below the vertex. No ocelligerous tubercle. Frontal callus chestnut brown, vertical, and narrowly separated from the eyes. Median spot a slender, denuded, raised streak of the same color, reaching to upper third of the front. Subcallus yellow pollinose, not swollen but somewhat wrinkled. Cheeks and face gray pollinose tinged with yellow above, near the eyes, and with nearly white hair. Antennae dark reddish brown, the third segment darker, the annulate portion black; first and second segments with black hair; shape as in Fig. 6. Palpi orange-brown, with short black hair; second segment about 3 mm. long and shaped as in Fig. 6.

Thorax reddish brown above, the fine grayish pollen giving it a lavender tone; pleurae reddish above, darker below, the venter and coxae dark gray. Wings faintly tinged with brown, the costal cell orange-brown. Furcation of vein  $R_{4+5}$  and cross-veins margined with brown. Cell  $R_5$  nearly closed. Tibiae, except apical half of the fore pair, reddish brown, the hind tibial fringe strong, black; rest of legs black, or nearly so.

Abdomen orange-brown, sometimes with an indication of median black spots anteriorly and small pale triangles posteriorly on some of the tergites. Most of the abdominal hair black, but hind margins of tergites laterally, and sternites, with yellowish hair.

Holotype female and paratype from Charleston, S. C., 29. VII. 1913. Two paratypes from Billy Island, Okefenokee

Swamp, Ga., 1-5 Sept., 1913. Holotype and paratypes in United States National Museum Collection (Cat. No. 50613).

This species can be separated from *turbidus* Wied. by its long palpi and black hind tibial fringe, from *nefarius* Hine by its black femora, and from *abdominalis* Fabr. by its long, somewhat truncate palpi and its larger size.

#### *Tabanus coaretatus*, n. sp.

*Female*.—Length 14-17 mm. Eyes bare. Front five and a half to six times as high as its width at the frontal callus; width of vertex is to width at callus as 3 : 2; yellowish brown pollinose, grayer at vertex. Frontal callus a vertical rectangle touching the eyes; median spot slender, somewhat longer than the frontal callus. Subcallus concolorous with front. First two antennal segments reddish brown with black hair; third entirely black; shape as in Fig. 2. Face and cheeks dirty, grayish brown with pale hair. Palpi light brownish, with short, slightly paler hair; shape as in Fig. 2.

Mesonotum brown with paler pollinose stripes; pleurae, venter, and coxae grayish brown. Scutellum entirely tan pollinose and pilose. Wings nearly hyaline; costal cell yellowish brown; longitudinal veins of the fore part of the wing weakly margined with brown and rather distinct infuscations at the furcation of vein  $R_{4+5}$  and the base of cell  $M_1$ . Legs nearly uniformly reddish brown.

Abdomen brown with a median row of large tan triangles arising from posterior bands which widen laterally to almost form posterior triangles. Venter uniformly light brown.

Holotype female and five paratypes from Immokalee, Fla., on horse, 16. VI. 1933, O. C. Van Hyning. In United States National Museum Collection (Cat. No. 50615).

Resembles *gracilis* Wied., but the front much narrower and more of a spot at furcation of vein  $R_{4+5}$ . Differs from *equalis* Hine and *turbidus* Wied. in shape of the antennae, smaller size, and generally paler color.

#### *Tabanus lacustris*, n. sp.

*Female*.—Length 16-19 mm. Eyes bare. Front five and a half to six times as high as its width at the callus, and slightly widened above; yellowish gray pollinose with dark streaks to either side of the median spot, and with short black hair. Frontal callus dark reddish brown, narrowly separated from the eyes and distinctly vertical; median spot a slender connected line of the same color. Subcallus flat, yellowish gray pollinose; face and cheeks gray with white hair. Antennae black, or nearly so, with black hair; shape as in Fig. 3. Palpi dirty yellowish white with short hair, mostly black; shape as in Fig. 3.

Mesonotum and scutellum reddish brown, the former with faint lines of grayish pollen and pile; antealar tubercles with dense black hair; pleurae paler with mixture of whitish and black hair. Wings hyaline with the costal cell and stigma yellowish brown; a faint brownish tinge along the anterior longitudinal veins and the cross-veins and a rather distinct spot at the furcation of vein

R<sub>4+5</sub>; a distinct stump vein at the furcation; cell R<sub>5</sub> nearly closed, closed, or sometimes slightly petiolate. Coxae gray pollinose; rest of legs black except for white on basal half of fore tibiae and slightly more, basally, on mid and hind tibiae.

Dorsum of abdomen nearly black with a distinct row of median white triangles on tergites 1-6, and narrow posterior bands, widening laterally. Venter dark reddish to black with rather wide, posterior pale bands.

Holotype female from Lakeland, Fla., G. G. Ainslie. Paratypes, four females from St. Cloud, Fla., May 30, 1933, on horses and in car, F. C. Bishopp; one female, St. Cloud, Fla., April 30, 1933, on horse, F. C. Bishopp. Types in the United States National Museum Collection (Cat. No. 50616). Other specimens from Sebring, Fla., in building, June 14, 1933, O. C. Van Hyning.

This species is very close to *melanocerus* Wied. but the stump and infuscation at the furcation of vein R<sub>4+5</sub> and the more extensive black on the hind tibiae will serve to distinguish it. These characters will also separate it from *petiolatus* Hine, in which the hind tibiae are entirely yellowish and the front is narrower.

#### *Tabanus arborealis*, n. sp.

*Female*.—Length 14-15 mm. Eyes bare. Front about three and a half times as high as its width, parallel-sided, with yellowish brown pollen and black hair; vertex flat, pollinose, with no ocelligerous tubercle. Frontal callus rather small, distinctly separated from the eyes, slightly vertical, and narrowed above; median spot broadly joined to the frontal callus and tapering to a point at the upper third of the front; frontal callus orange-brown, the median spot nearly black. Subcallus slightly swollen, yellowish brown, with concolorous pollen. First two antennal segments dark reddish brown with black hair; third black; shape as in Fig. 5. Face and cheeks light gray with white hair. Palpi pale reddish brown with black hair; shape as in Fig. 5.

Thorax dark brown above with pale lines in the usual pattern, the pleurae lighter and grayer; humeral and antealar tubercles light. Wings hyaline with brown veins, the venation normal. Legs dark reddish brown with grayish pollen, the fore femora, apices of tibiae, and tarsi, nearly black; hind tibial fringe sparse, entirely black.

Abdomen dark brown above with three rows of nearly white spots, the median triangles on tergites 2-4 not quite reaching across the tergite; lateral spots oblique, faint on tergites 1 and 3, lacking on 4-7. Venter dark brown, the sutures narrowly pale pollinose and pilose.

Holotype female from Rutland, Vt., Aug. 1-15, 1916, Chittenden. Paratype from Mt. Tom, Mass., G. Dimmock. In United States National Museum Collection (Cat. No. 50617). Paratype, Shawbridge, Que., 11. VII. 1927, A. F. Winn. In Collection of the American Museum of Natural History.

This species resembles *vivax* O. S., but lacks the enlarged first antennal segment and wide front of this species. It is close to *nivosus* O. S., but in *nivosus* the median triangles are much smaller and the lateral triangles larger. From *fulvicallus* Phil. it can be distinguished by (1) black hairs on the base of the apical palpal segment, (2) slightly wider front, (3) scarcely depressed vertex, (in *fulvicallus* there is a distinct depression with a V-shaped swollen portion around it), (4) entirely black annulate portion of the antennae, the last annulus not being yellowish, and (5) the median triangles on the third tergite not reaching clear to the anterior margin.

***Tabanus mularis*, n. sp.**

*Female*.—Length 10–12 mm. Eyes naked with a single diagonal stripe in life. Front yellowish pollinose, about four times as high as its width at the callus, with narrowly parallel sides. Frontal callus dark brown to black, narrowly separated from the eyes and slightly vertical; median spot small and usually separated from the callus. Subcallus, and cheeks above level of antennae, concolorous with front; rest of cheeks and face gray, faintly tinged with yellow. First antennal segment reddish brown with rather dense, short, black hair; rest of antennae orange-brown, the apical portion slightly darker; shape as in Fig. 4. Palpi pale creamy with black hair; shape as in Fig. 4.

Dorsum of thorax olive-green, unstriped; the remainder gray, faintly tinged with olive-green. Wings hyaline, the costal cell orange-brown. Femora black with greenish gray pollen; tibiae yellow, the apical two-thirds of the fore pair, and apex of the others, black; tarsi black.

Abdomen black with a median stripe of light, yellowish gray pollen and an indication of faint lateral stripes. Venter olive green, sometimes quite dark.

Holotype female and seventeen paratypes from Baton Rouge, La., H. Morris. (Cat. No. 50618.) The writer has determined as this species numerous specimens from Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, Virginia, and Maryland.

This is close to *vicarius* Walk. and has been confused with this species, but lack of strong yellow on face, cheeks, palpi and pleurae, and the usually blacker abdomen, will separate it. From *fuscicostatus* Hine it differs in its more olive-green and less brownish mesonotum, blacker abdomen, and darker frontal callus; *nigrovittatus* Macq. can be distinguished by its extensive yellow brown on the sides of the abdomen and by its usually weakly colored costal cell.

***Tabanus nigrescens* Palisot subsp. *atripennis*, n. subsp.**

*Female and male*.—Length 24–26 mm. Black, structurally indistinguishable from the typical *nigrescens*. In both forms the costal cell is deep brown and the furcation of vein  $R_{4+5}$  and the cross-veins are margined with brown. In the

typical form, however, the cells of the wing, except near the base anteriorly, are hyaline, or nearly so; in *atripennis* the whole wing is deeply smoky, only slightly paler posteriorly, if at all.

Holotype female from Stillwater, Okla., June 22, 1931, Dr. G. W. Stiles, Jr. Allotype male, Comanche Co., Kans., 2,089 ft., 1916, R. H. Beamer. Paratypes: One male, Trego Co., Kans., 2,450 ft., July 12, 1912, F. X. Williams, and four females from Stillwater, Okla., June 20, 1931, H. Whitaker; San Antonio, Tex., 6,419, on man, Parman, Bishopp, Wells, and Babcock; Sheridan Co., Kans., 2,650 ft., F. X. Williams, and Comanche Co., Kans., 2,089 ft., 1916. Holotype, allotype, and two paratypes in United States National Museum Collection (Cat. No. 50619); male and female paratypes in Ohio State Museum Collection; female paratype in collection of Dr. James M. Brennan.

The typical *nigrescens* occurs in the East, not having been reported west of Illinois and Tennessee. Osten Sacken (1876, p. 453), in his description of *nigrescens*, describes a specimen from Canada that agrees with the description of *atripennis*, but the writer has not seen this specimen.

#### ***Tabanus bishoppi* Stone.**

1933. Proc. Ent. Soc. Washington. 35 : 75. ♀.

Shortly after the publication of the description of this species, the writer discovered, while going through the Hine collection of Tabanidae at the Ohio State Museum, two males and four females that had been set aside by Dr. Hine, perhaps with the intention of describing them. The male is herein described for the first time.

*Male*.—Eyes densely pilose, the facets of the upper half only slightly larger than those below. Palpi slender for a male *Tabanus*. Coloration as in the female, the abdomen somewhat yellower laterally.

These specimens were all from Florida, as follows: Cleveland, IV. 26. 1921, J. N. Knull; Gulfport, Pinellas Co., March 3 and March 9, 1925, F. M. Gaige; Gulfport; Lake City, V. 9. 1902; Dunedin, March, Blatchley.

#### ***Tabanus subniger* Coquillett.**

1906. Ent. News 17 : 48. ♀.

Four males of this species, collected with six females, at Ira, Ohio, July 1, 1920, were found in the Hine collection. The male is herein described for the first time.

*Male*.—Similar to the female in coloration. Antennae black, slender, the first segment nearly as wide as the third and somewhat flattened above. Facets

of eyes distinctly differentiated into large and small facets. Mesonotum dark brown with indications of lines. Differs from *stygius* Say in the eyes, which have the large facets more extensive and following down near the outer margin of the eye for a greater distance, making the lower, outer curve of these facets more acute.

This species has been confused in collections with *stygius*, from which the female can easily be distinguished by its broad, gray front, in contrast to the moderately wide, orange-brown front of *stygius*.

Other locality records are: The holotype, Lake Forest, Ill., June 27, 1904, J. G. Needham, (the original description gives March 27, but an examination of the label shows that it really is 27/VI/04 rather than 27/III/04); Turkey Foot Lake, Ohio (10 specimens); Ithaca, N. Y., June 28, 1892, July 20, 1915, and two others, undated; Canandaigua Lake, N. Y., July, 1927; Somerville, N. J., June, 1923.

#### *Tabanus fulvicallus* Philip.

1931. Univ. Minnesota Tech. Bull. 80 : 106.

Through the kindness of Professor Mickel of the University of Minnesota we examined the holotype of this species. In material borrowed from the Ohio State Museum were found six specimens of this species, five from Isle Royale, Mich., 25-28. VII. 1905, and one from Saranac Inn, N. Y., July 27, 1900. It is interesting to note that these six specimens, the holotype, and the paratype, were all collected between July 22 and July 30. The Ohio State Museum specimens are considerably larger than the types, being 15-16 mm. long, but they are identical in structure and color and we have no hesitation in determining them as *fulvicallus*. This species is close to *arborealis*, but while the distinguishing characters are slight they seem sufficient to make them separate species.

#### *Tabanus sexfasciatus* Hine.

1923. Canadian Entomologist 55 : 144.

Syn. *Tabanus borealis* of Loew and Meigen, not Fabricius.

Fabricius named and described *Tabanus borealis* (1781, p. 459). This species has not been recognized by recent European workers, although Surcouf in Wytzman (1920, p. 73) and Kröber in Lindner (1925, p. 65) have considered it to be probably the same as *Tabanus lapponicus* Wahlb. Loew (1858, p. 28) redescribed *Tabanus borealis* Fabr. and since then Bezzi in Kertész (1903, p. 60) and Kröber in Lindner (1925, p. 61) have credited the name *Tabanus borealis* to Loew. Surcouf in Wytzman (1920, p. 62) and Kertész (1908, p. 229) credit the name to Meigen (1820, p. 28), although he redescribed *Tabanus*

*borealis* Fabr. The well recognized *Tabanus* described by Loew, Meigen, and Kröber as *Tabanus borealis* is apparently different from *Tabanus borealis* Fabr., but since, as is shown below, it is identical with *sexfasciatus* Hine, it is unnecessary to propose a new name for it.

The United States National Museum has six European females determined as *Theriopectes borealis* Loew, by Kröber, from Thuringen, Schreiberhau, and Tinos, and a male from Taunus, determined as *Theriopectes borealis* Meig. by Villeneuve. When this series was compared with seventeen specimens from Alaska of *Tabanus sexfasciatus* Hine, including nine of the type series, it was found that the two were the same. The Alaskan specimens average about 9/10 of the length of the European specimens, but there is complete intergradation in size and no structural or color differences can be found to separate them. Kröber gives the distribution of *borealis* as central and western Europe and Siberia. It is not surprising to find this species, like *Chrysops nigripes* Zett., to be Holarctic. We have determined two specimens from Labrador as *sexfasciatus* although they are smaller and in very poor condition.

***Tabanus vicarius* Walker.**

1848. List Dipt. British Mus. 1: 187.

Syn. *Tabanus costalis* Wiedemann, not Lichtenstein.

Since *Tabanus costalis* Wiedemann is preoccupied by Lichtenstein (1796, p. 213), it must be suppressed as a synonym of *Tabanus vicarius* Walker, the next available name. Austen (1908, p. 346) republished Lichtenstein's rare description and Surcouf (1921, p. 84), placed it as a possible synonym of *Tabanus striatus* Fabr.

***Tabanus fumipennis* Wiedemann.**

1828. Auss. zweifl. Ins. 1: 119, 11.

Syn. *Tabanus rufus* Palisot de Beauvois, not Scopoli. Ins. rec. Afr. et Amer. p. 100, pl. 2., fig. 1, 1809.

Osten Sacken placed *Tabanus fumipennis* Wied. as a synonym of *Tabanus rufus* P. de B., and there is no reason to doubt their identity. However, since *Tabanus rufus* P. de B. is preoccupied by *Tabanus rufus* Scopoli (1763, p. 373) *Tabanus fumipennis* Wied. becomes the valid name of the species.

***Tabanus fumeus*, new name.**

Syn. *Tabanus fumipennis* van der Wulp, not Wiedemann. Diptera Sumatra Expd. p. 18, 1890.

The name *Tabanus fumipennis* v. d. Wulp being preoccupied by *Tabanus fumipennis* Wied. (1828), the above new name is proposed.



**Tabanus imitans** Walker.

1848. List Dipt. British Mus. 1 : 146 (not. p. 173).  
 Syn. *Tabanus fuscopunctatus* Macquart. Dipt. Exot. Suppl. 4 : 34, 108, 1850.

Osten Sacken examined the types of both of these species and established the identity of the two species (1878, p. 228), but recognized Macquart's name on the grounds that Walker's description was not recognizable. Since the types have been studied, and still can be, there is no excuse for using the later name. The writer has seen a specimen compared with the type of *imitans* by Hine, and it is obviously the species described by Macquart and redescribed by Osten Sacken as *fuscopunctatus*.

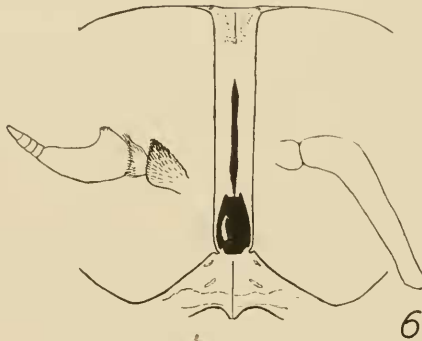
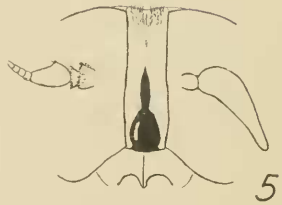
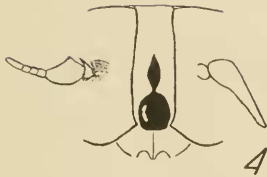
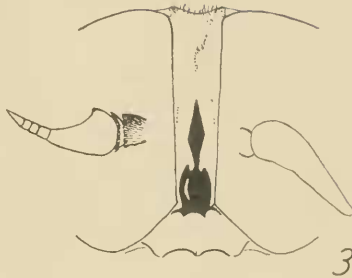
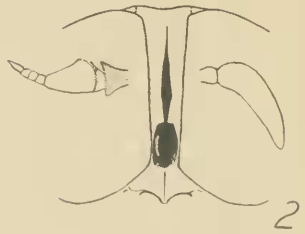
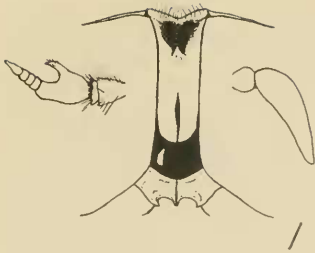
**Tabanus magnicallus**, new name.

Syn. *Tabanus maritimus* Townsend, not Scopoli. Ent. News 9 : 167, 1898.

There is little doubt but that *Tabanus nanus* Macquart is identical with *maritimus* Townsend, but since *Tabanus nanus* Macquart (1845) is preoccupied by Wiedemann (1821) and *maritimus* Townsend (1898) by Scopoli (1763, p. 374), the above new name is proposed for *maritimus* Towns.

LITERATURE CITED.

- AUSTEN, E. E.  
 1908. Ann. Mag. Nat. Hist. (8)1 : 344-346.
- BEZZI, M.  
 1903. In Kertész. Katalog der Paläarktischen Dipt. Band. III. Budapest.
- FABRICIUS, J. C.  
 1781. Species Insectorum. Vol. II.
- KERTESZ, O.  
 1908. Catalogus Dipteriorum. Mus. Nat. Hungaricum. Vol. III.
- KRÖBER, O.  
 1925. In Lindner. Die Flieg. der Palaearktischen Region. 19. Tabanidae.
- LICHTENSTEIN, A. A. H.  
 1796. Catalogus rerum naturalium rarissimarum Hamburgi. Sectio tertia (Insecta) Hamburgi.
- LOEW, H.  
 1858. Verh. zool. Bot. Ges. Wien. 8 : 473-612.
- MEIGEN, J. W.  
 1820. Syst. Besch. europaish. zweifl. Ins. Vol. 2.
- OSTEN SACKEN, C. R.  
 1876. Mem. Boston Soc. Nat. Hist. Vol. 2. Part 4.  
 1878. Cat. Dipt. North America. 2d ed. Smithsonian Miscell. Coll. 270.
- SCOPOLI, J. A.  
 1763. Entomologica Carniolica.
- WIEDEMANN, C. R. W.  
 1821. Diptera exotica. Kiliae.



| = 1 mm.

## EXPLANATION OF PLATE.

Antenna, front and palpus of:

1. *Dicladocera sexfasciata*, n. sp.
2. *Tabanus coarctatus*, n. sp.
3. " *lacustris*, n. sp.
4. " *mularis*, n. sp.
5. " *arborealis*, n. sp.
6. " *gladiator*, n. sp.

SYNONYMICAL NOTES ON *ECPHYLUS* FOERSTER, WITH  
DESCRIPTION OF ONE NEW SPECIES (HYM.,  
BRACONIDAE).

By C. F. W. MUESEBECK,

*Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture.*

The new parasitic species described in this paper was reared in connection with certain economic studies on wood-infesting Coleoptera. In order to explain my allocation of this species to the genus *Ecphylus* it becomes necessary to discuss briefly some new synonymy.

*ECPHYLUS* Foerster.

*Ecphylus* Foerster, Verh. naturh. Ver. preuss. Rheinl., vol. 19, 1862, p. 237.

Genotype, *Bracon silesiacus* Ratzeburg.

*Sactopus* Ashmead, Proc. U. S. Nat. Mus., vol. 23, 1900, pp. 146, 147. Genotype, *Sactopus schwarzii* Ashmead. (New synonymy.)

*Sycosoter* Picard and Lichtenstein, Bul. Soc. Ent. France, 1917, no. 16, p. 285.

Genotype, *Sycosoter lavagnei* Picard and Lichtenstein. (New synonymy.)

*Sactopus schwarzii* was described only as it was characterized in Ashmead's key to the genera of Pambolini. The apterous male with its conspicuously thickened posterior metatarsi induced the author to propose a new generic name for the species. I have been unable, however, to find any basis whatever for separating the winged female of *S. schwarzii* from *Ecphylus* as typified by *E. silesiacus* (Ratz.) and I do not believe the thickened metatarsus and the apterous condition of the male constitute sufficient grounds for generic distinction. I have, therefore, suppressed *Sactopus*. In the genus *Paraecphylus* Ashmead, which differs from *Ecphylus* only in having the first cubital and first discoidal cells confluent, males of certain species likewise have swollen posterior metatarsi exactly similar to those of *Sactopus*. That this character is not correlated with the loss of wings is evident from specimens of an unnamed species of *Paraecphylus* in the National Collection, in which the males are fully winged but still have the enlarged metatarsi.